

13-1: The Secant, Cosecant, and Cotangent Functions

Warm-up: In right triangle ABC , angle C is the right angle, $AC = 7$, and $AB = 13$. Give the exact values and estimate to the nearest thousandth for each.

1. $\sin A$

2. $\cos A$

3. $\tan A$

4. $\frac{1}{\sin A}$

5. $\frac{1}{\cos A}$

6. $\frac{1}{\tan A}$

secant θ :

cosecant θ :

cotangent θ :

Example 1: Find each value.

a. $\csc \frac{\pi}{6}$

b. $\sec \frac{\pi}{6}$

c. $\cot \frac{\pi}{6}$

Example 2: Evaluate to the nearest hundredth.

a. $\cot 4$

b. $\sec 70^\circ$

c. $\csc(-35^\circ)$

Homework:

"SUCCESS ISN'T PERMANENT, AND FAILURE ISN'T FATAL." - MIKE DITKA